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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,013	02/26/2002	Kazunobu Fujiwara	PW 0277041 H7625US	4298

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EXAMINER	
GIESY, ADAM	

ART UNIT	PAPER NUMBER
2651	

DATE MAILED: 08/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/083,013	FUJIWARA ET AL.	
	Examiner	Art Unit	
	Adam R. Giesy	2651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 June 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7 and 10* is/are rejected.

7)☒ Claim(s) *8,9,11 and 12* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 June 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings were received on 6/17/2005. These drawings are acceptable.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-5, 6, 7, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shim (US Pat. No. 5,970,208) in view of Tsukihashi (US Pat. No. 5,802,026).

Regarding claims 1 and 3-5, the rejections applied to claims 1 and 3-5 in the previous Office Action, mailed 4/12/2005 are hereby repeated for the same reasons (see Response to Arguments).

Regarding claim 2, Shim and Tsukihashi disclose all of the limitations of claim 1 as discussed in the claim 1 rejection above. Shim further discloses that the medium reader, the first memory, and the first controller are constructed as a single unit, and wherein the second buffer memory; the D/A converter, and the second controller are constructed as another single unit (as noted in the previous Office Action – Shim constructs the components together to make a single reproducing unit; see column 1, lines 7-11)

Regarding claim 6, Shim and Tsukihashi disclose all of the limitations of claim 1 as discussed in the claim 1 rejection above. Shim further discloses that the first controller controls writing of the first buffer memory to be done intermittently (this is inherent as the data that is being stored in the first buffer memory must also pass through the ECC which is also controlled by the first controller, which intermittently controls the buffer memory and the ECC – see column 2, lines 52-58). Shim does not disclose that the components are functioning at a speed higher than the normal reproducing speed.

Tsukihashi discloses an optical disc reader that is made to function at a speed higher than a normal reproduction speed (column 2, lines 15-32).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the optical device as disclosed by Shim with the faster reading rate as disclosed by Tsukihashi, the motivation being to create an optical reading apparatus with improved buffering for seamless operation.

Regarding claim 7, Shim and Tsukihashi disclose all of the limitations of claim 6 as discussed in the claim 6 rejection above. Shim further discloses that the second controller controls reading of the second buffer memory according to a sampling rate (the seconds memory is read out according to requests from the audio drivers – which is the sampling rate, see column 2, lines 20-22).

Regarding claim 10, Shim and Tsukihashi disclose all of the limitations of claim 5 as discussed in the claim 5 rejection above. Shim further discloses that the second controller controls reading of the second buffer memory according to a sampling rate

(the seconds memory is read out according to requests from the audio drivers – which is the sampling rate, see column 2, lines 20-22).

Allowable Subject Matter

4. Claims 8, 9, 11, and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 8 is allowable over prior art of record which does not disclose or suggest all of the limitations of claim 6, as well as the further limitation that **said second controller monitors a remaining data amount in the second buffer memory, and when the remaining data amount becomes small, reads the digital data from the first buffer memory and writes the digital audio data into the second buffer memory.**

Claim 9 is allowable over prior art of record which does not disclose or suggest all of the limitations of claim 6, as well as the further limitation that **said first buffer memory has a larger capacity than the second buffer memory.**

Claim 11 is allowable over prior art of record which does not disclose or suggest all of the limitations of claim 5, as well as the further limitation that **said second controller monitors a remaining data amount in the second buffer memory, and when the remaining data amount becomes small, reads the digital data from the first buffer memory and writes the digital audio data into the second buffer memory.**

Claim 12 is allowable over prior art of record which does not disclose or suggest all of the limitations of claim 5, as well as the further limitation that **said first buffer memory has a larger capacity than the second buffer memory.**

Response to Arguments

5. Applicant's arguments filed June 17, 2005 have been fully considered but they are not persuasive.

Applicant, on page 8 of the response, filed June 17, 2005, argues that the Shin reference (US Pat. No. 5,970,208) does not control the medium reader, however the Examiner respectfully disagrees. Shin clearly shows a frame sync signal (labeled "Sf" in Figure 1) coming from the system decoder (Figure 1, element 200) that is sent to the PLL means (element 300) and then to the disk drive controller (element 400). This signal is considered an element of control of the disk reader, as the signal in combination with the disk drive controller, control the disk drive, and hence also control the reading means.

Applicant, on pages 9 and 10 of the response, filed June 17, 2005, argues that the Tsukihashi reference (US Pat. No. 5,802,026) does not disclose the claimed "audio reproducing rate" as in the current application. Examiner respectfully disagrees. In both the current application and the Tsukihashi reference, the optical disk is being read (or reproduced) at a rate faster than it is being used – hence the use of buffer memory. The rate at which digital audio data is reproduced is comparable to the rate at which other digital data is reproduced, as they are both forms of digital data and they are both recorded on an optical disk.

Applicant, on pages 10 and 11 of the response, filed June 17, 2005, argues that the Shin reference (US Pat. No. 5,970,208) does not disclose the second memory, D/A converter, and second controller as being constructed as one unit, however the Examiner respectfully disagrees. All the elements listed above, as disclosed by Shin, are constructed in the same unit. Please see the claim 2 rejection above.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adam R. Giesy whose telephone number is (571) 272-7555. The examiner can normally be reached on 8:00am- 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Hudspeth can be reached on (571) 272-7843. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ARG 8/10/2005 ARG

DAVID HUDSPETH
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